

Amendments to the Claims

The following is a complete set of the pending claims.

1-21. (Cancelled)

22. (Currently amended) A method of generating a three-dimensional image of a target area, the method comprising the steps of:

providing an imaging device,

providing a range finder,

operating the imaging device to provide an image of the target area, ~~and subsequently measuring the distance to each of a plurality of points by scanning the range finder at preset intervals relating to the points.~~

digitizing the image to provide a plurality of pixels within the digital image,

calculating horizontal and vertical angles between a reference point in the image and each pixel,

moving the range finder through the horizontal and vertical angles whereby the range finder is directed at each pixel in sequence, and

actuating the range finder to obtain a range to the target corresponding to the position of the pixel.

23. (Original) A method according to claim 22, wherein the method includes the further steps of

obtaining a focal length of the camera;

obtaining a field of view of the camera; and

obtaining a principal distance of the camera.

24. (Cancelled)

25. (Currently amended) A method according to claim 22 [[24]], wherein the method includes the additional steps of

assigning x and y coordinates for each pixel within the image;

correlating the range to the target with each pixel within the image; and

calculating three dimensional coordinates of the pixels to reconstruct a three dimensional image of the target area.

26. (Original) A method according to claim 25, wherein the method includes the additional steps of

plotting each of the three dimensional points of the image; and

superimposing a wire frame over the image connecting each of the three dimensional points.

27. (Original) A method according to claim 26, wherein the method includes the additional step of superimposing the image on the wire frame to reconstruct a three dimensional image of the target area.

28. (Currently amended) A method according to claim 22 [[24]], the method including the further steps of

obtaining a horizontal offset and a vertical offset between an axis of the camera and an axis of the range finder;

calculating the horizontal and vertical offsets in terms of pixels;

calculating the difference between the horizontal and vertical offsets in terms of pixels and the x and y coordinates of the target pixel; and

calculating the horizontal and vertical angles.

29. (Currently amended) A method according to claim 22 [[24]], wherein the method includes the further steps of

- providing the range finder and/or camera on a pan and tilt unit;
- providing angle encoders to measure the angles of pan and tilt of the unit;
- instructing the pan and tilt unit to pan and tilt the range finder and/or camera through the vertical and horizontal angles;
- measuring the horizontal and vertical angles using the encoders;
- verifying that the angles through which the range finder and/or camera are moved is correct;
- obtaining horizontal and/or vertical correction angles by subtracting the measured horizontal and vertical angles from the calculated horizontal and vertical angles;
- adjusting the pan and tilt of the range finder and/or camera if necessary; and
- activating the range finder to obtain the range to the target.